

REMARKS

The Office examined claims 1-9 and rejected same. With this paper, the claims are changed, none are canceled, and one claim is added. Thus the application now includes claims 1-10.

Objections to the drawings

At paragraph two of the Office action, the Examiner raises various objections to the drawings. In response, applicant provides herewith replacement drawing sheets for the objected to drawings in case of changes to the drawings, and addresses the objections otherwise as below. The replacement drawing sheets provide changes to Figs. 1A, 1B, 5, 9A, 9B and 9C.

The examiner objects to Fig. 1A for the label KB not being defined. In the replacement drawing sheets, the label KB is replaced by "knowledge base."

The examiner objects to Fig. 5 for the third, fourth, and fifth blocks not being described in the detailed description of the invention and, moreover, the fourth and fifth being exactly the same. With this paper, the description of Fig. 5 (at page 25, beginning line 14) is changed to more closely correspond to Fig. 5, using Fig. 5 as support for the changes. In addition, applicant thanks the Examiner for pointing out the error of repeating block four as block five, and the replacement drawing sheets eliminate the fifth block in Fig. 5 as filed.

The examiner objects to Fig. 7 because the detailed description of Fig. 7 allegedly does not include each of the elements depicted in the figure. Applicant respectfully submits that the explanation (express or implied) of the elements in Fig. 7--i.e. labeled elements 11, 72 and 12 and also the data flows--can be found in the paragraph starting on page 27, line 3.

The Examiner objects to the drawings because "reference characters 'C' and 'C_Q' have both been used to designate corrective control," and because "reference characters 'C' and 'C_R' have both been used to designate preventive control." The Office action does not indicate any particular figure in this regard. Applicant has reviewed all of the drawings and cannot see where applicant has used reference characters 'C' and 'C_Q' and 'C_R' in the way objected to in the Office action. In respect to Figs. 9A-9C, applicant does note that in the as-filed application at page 30, line 7, there is a description of Figs. 9A-9C as follows:

An "M" inside a data-item block indicates that the item is manually assessed, i.e. the field corresponding to the data is being treated as a measuring field instead of a calculated field. A "C" inside such a block indicates that the data item is calculated by the invention. The "R" in the diagram indicates risk, the "Q" represents consequence, and the "C" represents a control, either a preventive control, and so associated directly with the risk, or a corrective control, and so associated directly with the consequence.

Applicant respectfully submits that it is reasonably clear that what is intended here is that the "C" used to indicate a control is a subscripted "C"--i.e. either a "C_R" or a "C_Q"--as opposed to only the letter "C" used to indicate an automatically calculated quantity. With this paper, applicant has changed the specification in that regard. Applicant therefore now respectfully submits that it is clear that a reference character of only 'C' (no subscript) is used only to indicate an automatically calculated quantity, regardless of the type of quantity. Support for the change is at page 30, ll. 29 -30.

The Examiner objects to Figs. 9A, 9B, and 9C for text not being properly oriented. In the replacement sheets, the orientation of vertical text in Figs. 9A, 9B and 9C is changed to appear in a horizontal, left-to-right fashion when the page is either upright or turned so that the top becomes the right side.

Also in the replacement sheets, Fig. 1B is changed to indicate that the two record structures are logically related as shown in Fig. 1A, and the bracket is removed, per the description in the paragraph beginning at page 10, line 7. (Further, a drawing error in Fig. 1A is corrected so that now the data flow labeled "existing risk records for use in a profile" is shown terminating at the block indicated as "Profile 1," where before the end of the data flow line was covered by the block labeled "Profile 2." Support for the change is in the application at the paragraph beginning at page 8, line 25. See also page 28, ll. 14-18, and also Fig. 7.)

Objections to the specification

At paragraph 4 of the Office action, the examiner objects to the specification on the ground that the brief description of Fig. 3 (at p. 5, ll. 9-10) is inconsistent with the detailed description of Fig. 3 (at p. 23, ll. 19-20). Applicant respectfully disagrees. The brief description indicates that Fig. 3 is a data structure diagram for a control record (a component of a risk record), and the detailed description in respect to Fig. 3 is as follows:

Referring now to Fig. 3, fields provided by the system in the preferred embodiment for creating an action plan are shown as including for each control field an associated (read-only) hierarchy field, showing the risks and consequences associated with the control, a description field (already mentioned), an assigned to field, a status field for indicating the status of the effort to implement the control, a fitness field for indicating whether the control is a key control (i.e., a critical control), a fallback control or a redundant control, and a due date field for indicating the date by which the control is planned to be in place. [Emphasis added.]

Thus, both the brief description of the drawings and the detailed description of the invention indicate that Fig. 3 depicts (fields of) a control record. (In other words, the brief description indicates that the structure of the control record is shown, and

since a record consists of fields, to show the structure of a record, its fields are indicated, which is what is done in Fig. 3, and which is indicated in the detailed description.)

At paragraph 4 of the Office action the specification is also objected to because reference characters 11 and 12 do not appear in Fig. 1B. In the replacement drawing sheets, Fig. 1B includes reference characters 11 and 12.

At paragraph 4 of the Office action the specification is also objected to because the detailed description of Fig. 4 allegedly lacks an explanation of the "fallback" and "redundant" elements depicted in the figure. Applicant respectfully submits that in the detailed description of Fig. 3, occurring earlier in the detailed description than the description of Fig. 4, the elements "key," "fallback" and "redundant" are introduced and explained as being levels of the fitness field (at p. 23, ll. 25-29). Therefore, applicant respectfully submits that it is not necessary to again explain these elements in the detailed description of Fig. 4. A change is made in the detailed description though in respect to Fig. 4, which shows the value "key" as the value being selected for "fitness." The specification is changed (in the paragraph beginning at age 25, line 3) to give "key" as the example of the value selected for "fitness." The specification thus now corresponds more closely to Fig. 4.

At paragraph 4 of the Office action the specification is also objected to because the detailed description allegedly lacks explanation of the third and fourth steps shown in Fig. 5. As explained above in respect to the objections to the drawings, applicant has changed the description of Fig. 5 to more closely correspond to the steps shown in Fig. 5.

At paragraph 4 of the Office action the specification is also objected to because the detailed description lacks a reference to Fig. 9C. With this paper, the specification is changed at page 31, line 25 to include a reference to (only) Fig. 9C (as opposed to a reference to Figs. 9A-9C, already in the application).

At paragraph 5 of the Office action, the specification is objected to for failing to provide proper antecedent basis for the subject matter of claim 8. The examiner states that the field "residual risk impact cost," which is claimed as "aggregated over the residual cost of each consequence of the risk" in claim 8, is defined in the specification at page 15, ll. 17-22 as "the product of the inherent likelihood, the effectiveness of whatever corrective control is associated with a particular risk record, and the inherent cost of the risk event, aggregated over all corrective controls." Applicant respectfully submits that at page 16, beginning line 9, the residual cost is defined to be 'the inherent cost multiplied by the effectiveness of whatever corrective control, if any, is included in the risk record.' Thus, the definition of residual risk impact cost at page 15, ll. 17-22, is consistent with defining the residual risk impact cost as the product of the inherent likelihood and the residual cost of each consequence, aggregated over the over the residual cost of each consequence of the risk. This is so because the product of the effectiveness of whatever corrective control is associated with a particular risk record (which is associated with a particular consequence) and the inherent cost of the risk event is the residual cost, and aggregating over the residual cost of each consequence is the same as (or is just another way of saying) aggregating over all corrective controls. In other words,

*(effectiveness of corrective control for a risk of a consequence) * (inherent cost of the risk of the consequence) = residual cost of the consequence,*

and so adding up the residual cost for all consequences is the same as (numerically equivalent to) summing over all corrective controls. Thus, applicant respectfully submits, there is antecedent basis for the subject matter of claim 8. In addition, of course, the application provides antecedent basis for claim 8 in the summary of the invention section, at page 4, ll. 9-10.

At paragraph 6 of the Office action, the specification is objected to in respect to the use of trademarks. With this paper, all trademarks appearing in the specification are now capitalized. It is believed that the requirement to accompany a trademark by a generic terminology is met. For example, the specification now reads, "the WINDOWS EXPLORER file manager application," where the capitalized words are the trademark, and "file manager" is the generic terminology.

Claim Rejections under 35 USC §112

At paragraph 7 of the Office action, claims 1-9 are rejected under 35 USC §112, second paragraph, as being indefinite. With this paper, the claims are changed in a way believed to overcome the grounds for the rejections under 35 USC §112, second paragraph. Accordingly, applicant respectfully requests the rejections under 35 USC §112, second paragraph, be reconsidered and withdrawn.

Claim Rejections under 35 USC §102

At paragraph 8 of the Office action, claims 1, 2, 4, 5 and 9 are rejected under 35 USC §102(b) as being anticipated by Mulholland (article, "Risk Assessment and Construction Schedules," by B. Mulholland and J. Christian).

Claim 1 is directed to the aspect of the invention in which a profile record (for a particular task or undertaking) is used to refine a generic risk record typically already having values for at least some of its field. The profile risk record is so used after the task is finished and the field values of the profile risk record can then be said to be based on actual experience. Thus, the knowledge base of generic risk records can be said to "learn over time." At a later time and in respect to another task, in an aspect of the invention now claimed in new claim 10, the refined generic risk record can then be used to provide starting values for at least some of the fields of the profile risk record for the new task.

In rejecting claim 1, it is asserted in the Office action that the element of claim 1 recited as "a risk processor, for updating generic risk records based on profile risk records in the data store profiles," is disclosed at page 11, column 1, lines 12-17 of Mulholland. But the cited passage of Mulholland simply indicates identifying schedule risks, evaluating their effects and their probability of occurrence, and modeling the risks and their effects to obtain the projects schedule risk profile within the proposed project schedule framework. There is no teaching of updating a generic risk record based on a profile risk record.

In asserting that Mulholland teaches a knowledge base including generic risk records with field values that can be refined over time so as be useful in providing a more accurate risk assessment for a particular profile, the Office action refers to page 12, col. 2, last paragraph of Mulholland, which describes changes in elements within the knowledge base model. The applicant respectfully submits that at the cited location, Mulholland teaches using an Excel spreadsheet model for a sensitivity analysis accomplished by varying one "uncertain

element" at a time and examining the effect of the variation of that element on the total project performance time. Such sensitivity analysis is based on hypothetical variations in the "uncertain elements" and the outcome depends on the assumptions of the model. In the present invention, a generic risk record in the knowledge base is updated over time based on a profile risk record having values determined from an actual task or undertaking, instead of a hypothetical task or undertaking having a hypothetical value of an "uncertain element." The Office action also refers to page 14, col. 2, lines 10-13 of Mulholland for the teaching of transferring project experience and institutional knowledge to new projects, but what actually is found at the cited location is merely a statement that a general objective or goal of a risk assessment system is to enable the transfer of project experience and institutional knowledge to new projects, rather than any teaching of how to do such a transfer. What is disclosed elsewhere in Mulholland is simply the recording of experiences in a general way and not the updating of a generic risk record based on a profile risk record. There is not even in Mulholland ever a teaching of using both a generic risk record (having a plurality of fields) and also a profile risk record (having corresponding fields). Nevertheless, with this paper, in order to more distinctly claim the invention and amplify the difference between the invention as claimed in claim 1 and the teachings of Mulholland, minor changes have been made to claim 1 to make more clear that claim 1 is directed to the aspect of the invention in which a generic risk record having fields at least some of which have values based on experience gained over time is updated (i.e. so as to refine the values of at least some of its fields) based on (actual experience in arriving at) values of the fields of a corresponding profile risk record (corresponding in the sense of having the same fields as the generic risk record). The aspect of the invention to which claim 1 is directed is

explained primarily by Fig. 1A, and by Fig. 7 and the corresponding description at page 27, beginning line 3, and also at page 20, ll. 8-11.

Further in regard to the rejection of claim 1, the Office action also asserts that Mulholland teaches a knowledge base, for maintaining generic risk records, a generic risk record including a plurality of different fields, and in so asserting cites the hypercard knowledge base in Fig. 5, the previous project experience noted in Fig. 2, and the historical data discussed at p. 11, col. 1, line 5. Applicant respectfully submits that first, while the hypercard knowledge base can be considered a repository of project experiences, it does not include a generic risk record having the same plurality of fields as a profile risk record, as recited in claim 1, and it is not updated or refined over time by a risk processor using the values of the corresponding fields of the profile risk record, as recited in claim 1. The hypercard knowledge base of Fig. 5, referred to as a hypercard information system for risk identification in the text (page 12, col. 2, first heading), is described (at page 12, col. 2, after the heading) as follows:

... The system is composed of schedule risk information (facts, data, and heuristics) linked to together using hypertext tools. The information can be in the form of text, graphics, or pictures. Thereby, typical project risks can be documented and made available to assist new project teams in becoming aware of general risk information and the possible inferences for a specific project.

Applicant respectfully submits that the hypercard system of Mulholland is in effect simply an electronic form of a notebook of past experiences. Although there is a kind of structure to the knowledge base of Mulholland--the links are explained at col. 2, third full paragraph, to be "divided into two types: organizational and navigational," with "organizational links connect[ing] the structure of the system"--it is not a knowledge base of (generic risk) records having fields (as recited in claim

1), and there is no corresponding (profile risk) record having corresponding fields and used to refine the values of the respective fields in the record of the knowledge base, as in claim 1. The Office action does assert that Mulholland teaches a data store of profiles including a profile risk record having the same plurality of fields as the generic risk record, citing profile risk record, and in so asserting cites the conceptual project schedule in Fig. 2, and the estimate of project duration at p. 11, col. 1, ll. 8-12. However, the "conceptual project schedule" shown in Fig. 2 is not a profile risk record as that term is implicitly defined by claim 1 (a record having fields corresponding to fields of a generic risk record), nor is there a teaching of a profile risk record at the cited locations or elsewhere in Mulholland. As explained at p. 10, col. 2, first full paragraph, the subject of Mulholland is risk assessment, which involves risk identification and risk measurement, and the cited location at col. 11, col. 1, ll. 8-12, describes as part of risk assessment modeling the effects of uncertainty on a project schedule using three steps (recursively):

- (1) Identify schedule risks; (2) evaluate their effects and the probability of occurrence; and (3) within the proposed project schedule framework, model the risks and their effects to obtain the project's schedule risk profile.

Thus, Mulholland teaches a conventional approach to risk identification and measurement, doing so in generalities, but nowhere teaches using a profile risk record having the same fields as a generic risk record and using the profile risk record to update the generic risk record, as in claim 1.

As noted above, at page 11, column 1, fourth line from the end of the first full paragraph, Mulholland uses the term "risk profile." However, the terminology "risk profile" in Mulholland does not indicate a profile risk record as in the invention as claimed, but is rather a somewhat vague reference to the overall risk of completing a project on time. There is simply no

teaching in Mulholland of a generic or profile risk record as in the invention, nor the use of a profile risk record for updating a generic risk record as in claim 1.

Accordingly, applicant respectfully requests that the rejections under 35 USC §102 of claims 1, 2, 4, 5 and 9 be reconsidered and withdrawn.

Claim Rejections under 35 USC §103

The claims 3 and 6-8 are rejected under 35 USC §103(a) as being unpatentable over Mulholland in view of a prior art admission by applicant(s).

Since claim 1 is believed allowable for the reasons given above, applicant respectfully requests that the rejections of other claims, being dependent on claim 1, also be reconsidered and withdrawn.

New claim

New claim 10, depending from claim 1, is directed to the aspect of the invention in which the generic risk record, having at least some values based on experience gained over time (i.e. in one or even more actual undertakings), is used to set initial values for corresponding fields in the profile risk record, i.e. as a starting point for managing the risk in a new undertaking. Mulholland provides no such teaching. In addition, claim 10 is believed patentable because it depends from claim 1, believed patentable for the reasons given above. Support for claim 10 is provided by Fig. 1A (data flow entitled "existing risk records for use in a profile"), by Fig. 2, fourth step of procedure depicted there, and by Fig. 5, first step, and also in the corresponding descriptions, and especially page 22, ll. 1-7.

Conclusion

For all the foregoing reasons it is believed that all of the claims of the application are now in condition for allowance, and their passage to issue is earnestly solicited. Applicant's attorney urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

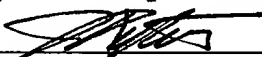
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